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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,312	12/02/2003	Norihiro Yamamoto	R2184.0283/P283	4926
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DICKSTEIN SHAPIRO LLP 1825 EYE STREET NW Washington, DC 20006-5403			EXAMINER CHOW, LIXI	
			ART UNIT 2627	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/725,312

Applicant(s)

YAMAMOTO, NORIHIRO

Examiner

Lixi Chow

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 6,7,12 and 14-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5,8-11 and 13 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of species of Figs. 8 and 9 in the reply filed on 1/12/07 is acknowledged. The traversal is on the ground(s) that examination of all claims will not be a serious burden because the searches for dependent claims 11 and 12 relating to focus offset and tilt offset would overlap. This is not found persuasive because the search for claims relating to focus offset is in class 369/53.28, whereas the search for claims relating to tilt offset is in class 368/53.19. Based on the species of Figs. 8 and 9, it is believed that claims 1-5, 8-11 and 13 are readable on the elected species.

The requirement is still deemed proper and is therefore made FINAL.

Claim Objections

2. Claim 10 is objected to because of the following informalities: on line 13 of claim 10, the word "determined" should be --measured--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 8-11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Salmonsens et al. (US 2002/0136121; hereafter Salmonsens).

Regarding claim 1:

Salmonsens discloses an optical data recording method, comprising the steps of:

interrupting an operation of recording data in an optical data recording medium when a predetermined amount of data is continuously recorded in the optical data recording medium by using a laser beam emitted from a laser (see paragraph [0019], lines 5-6);

measuring a recording state of the optical data recording medium immediately before the interruption (see paragraph [0019], lines 7-10);

correcting a recording power of the laser beam for a next recording operation in the optical data recording medium based on the measured recording state (see paragraph [0019], lines 10-11); and

starting the next recording operation by using the laser beam with the determined recording power in the optical data recording medium at a position immediately after the interruption (see paragraph [0019], lines 11-15).

Regarding claim 2:

Salmonsens discloses the optical data recording method as claimed in claim 1, wherein in the step of interrupting, the predetermined amount of data is determined so that a time period required for completing recording of the predetermined amount of data is shorter than a time period over which a recording quality degrades due to a rise of a temperature of the laser (see paragraph [0038]; the time period required for completing recording of the predetermined amount of data corresponds to the time when the temperature sensor sense the temperature of the laser being above the threshold).

Regarding claim 3:

Salmonsens discloses the optical data recording method as claimed in claim 1, wherein in the step of interrupting, the predetermined amount of data is determined so that a length along a

radial direction of the optical data recoding medium covered by the predetermined amount of data is shorter than a length over which a recording quality degrades due to a fluctuation of a sensitivity of a recording layer of the optical data recoding medium (see paragraph [0036]).

Regarding claim 4:

Salmonsens discloses the optical data recording method as claimed in claim 1, wherein in the step of measuring, the recording state is measured during a seek operation performed for the next recording operation after the interrupted recording operation (see paragraphs [0030] and [0032]).

Regarding claim 5:

Salmonsens discloses the optical data recording method as claimed in claim 1, wherein in the step of correcting, a change of the recording power in each correction is restricted to be less than a predetermined value (see paragraphs [0054]-[0055], it is inherent that the change of the recording power is restricted to be less than a predetermined value, so that data can be recorded at highest quality).

Regarding claim 8:

Salmonsens discloses an optical data recording device (see Figs. 2 and 3), comprising:

a recording state measurement unit (Fig. 3, element 330) configured to measure a recording state of an optical data recording medium;

a recording power calculation unit (Fig. 3, element 340) configured to calculate a recording power of a laser beam emitted from a laser for a next recording operation in the optical data recording medium based on the measured recording state;

a laser control unit (Fig. 3, element 280) configured to control the laser based on the calculated recording power; and

a recording control unit (Fig. 3, element 350) configured to interrupt an operation of recording data in the optical data recording medium when a predetermined amount of data is continuously recorded in the optical data recording medium, direct the recording state measurement unit to measure a recording state of the optical data recording medium immediately before the interruption, direct the recording power calculation unit and the laser control unit to determine a recording power of the laser beam for a next recording operation in the optical data recording medium based on the measured recording state, and start the next recording operation by using the laser beam with the determined recording power in the optical data recording medium at a position immediately after the interruption (see Fig. 4 and paragraph [0019]).

Regarding claim 9:

Claim 9 recites similar limitations as in claim 8; hence claim 9 is rejected under the same reason set forth above.

Regarding claim 10:

Salmonsens discloses an optical data recording method, comprising the steps of:

interrupting an operation of recording data in an optical data recording medium when a predetermined amount of data is continuously recorded in the optical data recording medium by using a laser beam emitted from a laser (see paragraph [0019], lines 5-6);

measuring a recording state of the optical data recording medium immediately before the interruption to measure a recording quality (see paragraph [0019], lines 7-10);

correcting a recording power of the laser beam for a next recording operation in the optical data recording medium based on the determined recording quality (see paragraph [0019], lines 10-11); and

starting the next recording operation by using the laser beam with the determined recording power in the optical data recording medium at a position immediately after the interruption (see paragraph [0019], lines 11-15),

wherein in the step of measuring, the recording quality is measured in a seek operation performed when starting the next recording operation after the interrupted recording operation, a setting being made so that a reading quality is an optimum during the measurement of the recording quality, and the setting being made so that the recording quality is an optimum after the measurement of the recording quality (see paragraphs [0030], [0032] and [0045] and Fig. 4).

Regarding claim 11:

Salmonsens discloses the optical data recording method as claimed in claim 10, wherein in the step of measuring, an offset of a focus position of a focus servo is set so that the reading quality is an optimum during the measurement of the recording quality in the seek operation, and the offset of the focus position is set so that the recording quality is an optimum after the measurement of the recording quality (see paragraph [0044]; since focus signal is being monitored during the recording, it is reasonable to conclude that this limitation is met).

Regarding claim 13:

Claim 13 recites similar limitations as in claims 8 and 11; hence claim 13 is rejected under the same reason set forth above.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takeuchi (US 6,424,608) is cited, because Takeuchi discloses an optical apparatus that measures a reproduction signal and adjusts the light power while data is being recorded.

Suzuki (USP 2003/0021199) is cited, because Suzuki teaches a disk drive that is capable of resuming recording when an interruption occurred.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lixi Chow whose telephone number is 571-272-7571. The examiner can normally be reached on Mon-Fri, 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LC 3/27/07


WAYNE YOUNG
SUPERVISORY PATENT EXAMINER